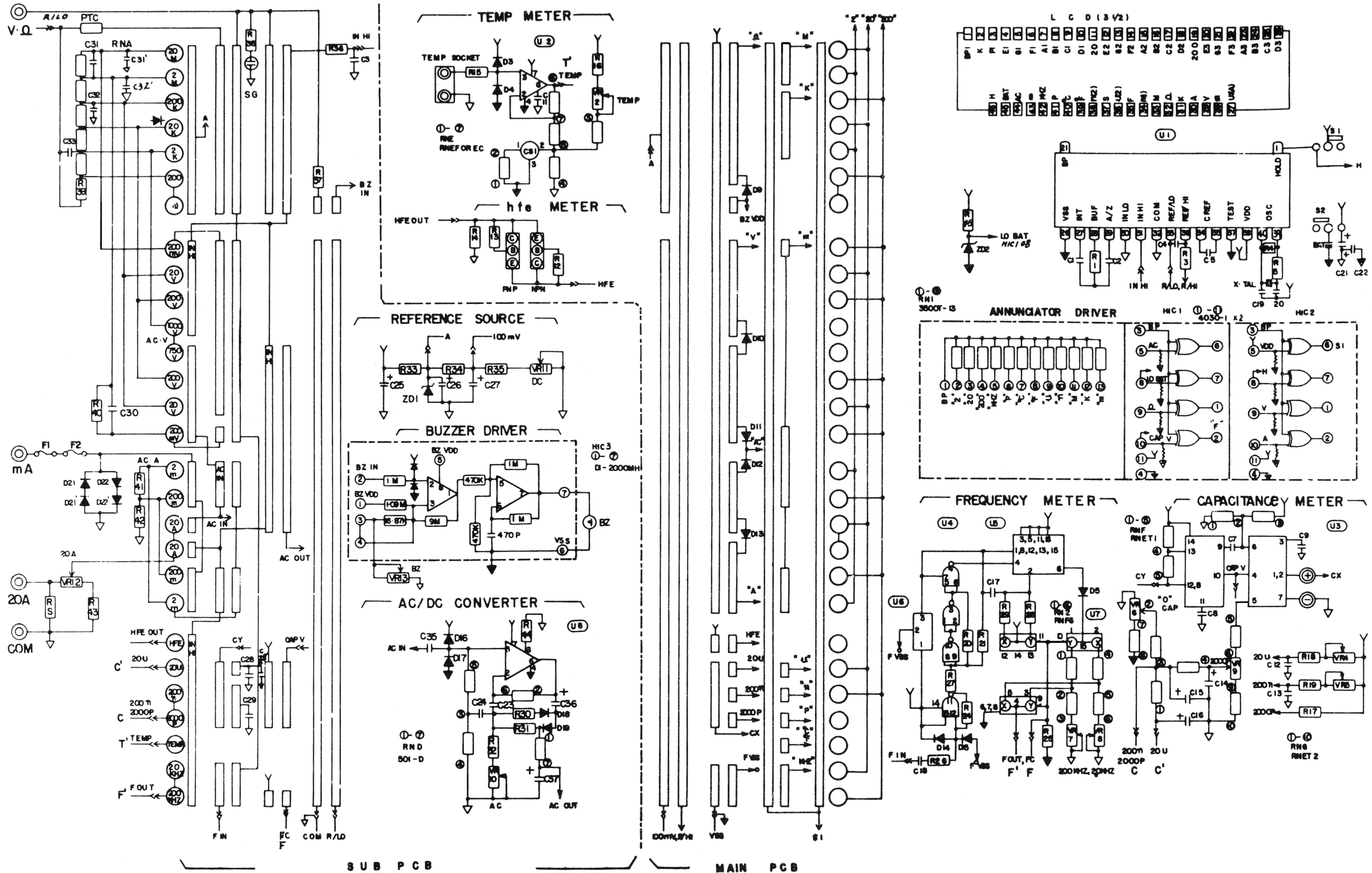


# SCHEMATIC DIAGRAM





# PARTS LIST

CODE	REF-NO	DESCRIPTION	SPECIFICATION
01-00001	U1	A/D CONVERTER	DM-205
01-00002	U2, 3	OP AMP	TL061CP
01-00003	U4, 12	ANALOG SWITCHING	CD4053
01-00004	U8, 9	NAND GATE	CD4011
01-00005	U10	DUAL MONSTABLE MULTIVIBRATOR	CD4528
01-00006	U11	TIMER IC	NE555
01-00007	U13	REGULATOR IC	79L05
01-00008	U7	OP AMP	LM308A
01-00009		HIBRIDE IC	HC-3500T
01-00010		LCD DISPLAY	3 1/2 DIGIT LARGE SEG
02-00001	Q1, 2	TRANSISTOR NPN SI	MPSA 92
02-00002	Q3, 4, 5, 6, 7, 10, 11	TRANSISTOR NPN SI	2N3904
03-00001	D1-4, 8, 9, 12-16	DIODE SWITCHING	1N4148
03-00002	D5, 10, 10', 11, 11'	DIODE RECTIFIER	1N4005
03-00010	ZD1	ZENER DIODE	1N9491A or MP5010HN (1.2V)
03-00011	ZD2	ZENER DIODE	1N963 (12V)
04-00001	VR1, 4	SEMI VR	500ohm RVW6FOR (AC, DC CAL)
04-00002	VR2	SEMI VR	300K RVW6FOR (200 ohmADJ)
04-00003	VR3	SEMI VR	500K RVW6FOR (8Z ADJ)
04-00004	VR5	SEMI VR	10K RVW6FOR (10A ADJ)
04-00005	VR8, 14	SEMI VR	20K RVW6FOR (TEMP, CAP ADJ)
04-00006	VR9, 10	SEMI VR	50K RVW6FOR (PNP, NPN ADJ)
04-00007	VR13	SEMI VR	2.2K "O" CAP ADJ
04-00008	VR15	SEMI VR	5K RVW6FOR (200KHz ADJ)
04-00009	VR16	SEMI VR	1K RVW6FOR (20KHz ADJ)
05-00001	RNA	RESISTOR NETWORK	HC-DMM-V
05-00003	RND	RESISTOR NETWORK	HC-501-D
05-00004	RN1	RESISTOR NETWORK	HC-3500-13
05-00005	RN2	RESISTOR NETWORK	HC-3500-4
05-00006	RN3	RESISTOR NETWORK	RN-ET1
05-00007	RN4	RESISTOR NETWORK	RN-ET2
05-00008	RN5	RESISTOR NETWORK	RN-EC or EF
05-00009	RN6	RESISTOR NETWORK	RN-F6
05-00020	R1	RESISTOR METAL FILM	120K ohm 1/4W F
05-00021	R3	RESISTOR METAL FILM	180K ohm 1/4W F
05-00022	R5	RESISTOR METAL FILM	4.5K ohm 1/4W F
05-00023	R16	RESISTOR METAL FILM	2.7K ohm 1/4W F
05-00024	R17	RESISTOR METAL FILM	56.2K ohm 1/4W F
05-00025	R18	RESISTOR METAL FILM	4.75K ohm 1/4W F
05-00026	R21	RESISTOR METAL FILM	11K ohm 1/4W F
05-00027	R41	RESISTOR METAL FILM	4.5M ohm 1/4W F
05-00030	R14, 19	RESISTOR CARBON FILM	470K ohm 1/4W J
05-00031	R4, 4', 32, 36, 42, 52	RESISTOR CARBON FILM	10K ohm 1/4W J
05-00032	R6, 7	RESISTOR CARBON FILM	110K ohm 1/4W J
05-00033	R9	RESISTOR CARBON FILM	390 ohm 1/4W J
05-00034	R10	RESISTOR CARBON FILM	100 ohm 1/4W J
05-00035	R11	RESISTOR CARBON FILM	39K ohm 1/4W J
05-00036	R12	RESISTOR CARBON FILM	160K ohm 1/4W J
05-00037	R13, 20, 22, 25, 34, 51	RESISTOR CARBON FILM	1M ohm 1/4W J
05-00038	R15	RESISTOR CARBON FILM	220K ohm 1/4W J
05-00039	R23	RESISTOR CARBON FILM	200K ohm 1/4W J
05-00040	R24	RESISTOR CARBON FILM	330K ohm 1/4W J
05-00041	R8	RESISTOR CARBON FILM	300K ohm 1/4W J
05-00042	R37, 40	RESISTOR CARBON FILM	100K ohm 1/4W J
05-00043	R38	RESISTOR CARBON FILM	10 ohm 1/4W J
05-00044	R39	RESISTOR CARBON FILM	150K ohm 1/4W J

CODE	REN-NO	DESCRIPTION	SPECIFICATION
05-00045	R47	RESISTOR CARBON FILM	1.5K ohm 1/4W J
05-00046	R48, 50	RESISTOR CARBON FILM	15K ohm 1/4W J
05-00047	R49	RESISTOR CARBON FILM	1.2M ohm 1/4W J
05-00049	R31	RESISTOR METAL FILM	99 ohm 1/2W C
05-00050	R44	RESISTOR CARBON FILM	75K ohm 1/4W J
05-00051	R45	RESISTOR CARBON FILM	3K ohm 1/4W J
05-00055	R26, 27	RESISTOR METAL FILM	100 ohm 1/2W C
05-00056	R28	RESISTOR METAL FILM	900K ohm 1/2W C
05-00057	R29	RESISTOR METAL FILM	100K ohm 1/2W C
05-00058	R30	RESISTOR METAL FILM	9M ohm 1/2W C
05-00060	R33	RESISTOR METAL FILM	1 ohm 1/2W C
06-00001	C1	CAPACITOR METALIZED	0.22uF 63V
06-00002	C2	CAPACITOR METALIZED	0.47uF 63V
06-00003	C3	CAPACITOR METALIZED	0.047uF 63V
06-00004	C4, 5, 11, 12	CAPACITOR METALIZED	0.1uF 63V
06-00005	C10	CAPACITOR MICA	0.022uF 630V
06-00010	C6, 6', 7, 7', 19	CAPACITOR ELECTROLYTIC	10uF 16V
06-00011	C18	CAPACITOR ELECTROLYTIC	4.7uF 16V
06-00012	C33, 34, 35	CAPACITOR ELECTROLYTIC	0.33uF 16V
06-00015	C13	CAPACITOR TANTAL	10uF 16V
06-00016	C14, 17	CAPACITOR TANTAL	1uF 16V
06-00020	C8	CAPACITOR CERAMIC	33pF 50V
06-00021	C9	CAPACITOR CERAMIC	100pF 50V
06-00022	C15	CAPACITOR CERAMIC	50pF 50V
06-00023	C16, 26	CAPACITOR CERAMIC	220pF 50V
06-00024	C20	CAPACITOR CERAMIC	0.01uF 500V
06-00025	C30	CAPACITOR CERAMIC	30pF 50V
06-00027	C27	CAPACITOR POLYSTYRENE FILM	220pF 16V
06-00028	C31, 32	CAPACITOR MYLAR	0.01uF 50V
06-00029	C36, 37, 39	CAPACITOR MYLAR	0.022uF 50V
06-00030	C38	CAPACITOR MYLAR	0.22uF 50V
06-00031	C28	CAPACITOR MYLAR	0.1uF 220V
07-00001		X-TAL	32.768KHz
07-00002	CS1	CURRENT SOURCE	LM334
07-00003	SG	SPARK GAP	1200V
07-00004	RS	SHUNT	PI 2 Mn
07-00005	B	BATTERY	9V
07-00006	B/S	BATTERY SNAP	"I" TYPE
07-00007	BZ	PIEZO BUZZER	DMP-27-E
07-00010	F1	FUSE	600V 2A HIGH ENERGY
07-00011	F2	FUSE	250V 0.2A
07-00012	S1, 2, 3	SLIDE SWITCH	PIC SS12F44-G5
07-00020		IC SOCKET	20Pin (D01-99020T6)
07-00021		IC SOCKET	8 Pin
07-00022		TR SOCKET	MOLEX 3024-03CH
07-00025		FUSE CONNECTOR	22-10-2035 (3 Pin)
07-00028		FUSE Pin	22-05-3030, or-3031 3 Pin
07-00029		PCB CONNECTOR	6 Pin